Module 7:

Nutrition & Health Assessment

Table of Contents

Overview

Introduction	This module will help you to understand how to assess the nutrition and health status of WIC participants.
Learning Objectives	After completing this module, the CNW will be able to: • define the terms <u>anthropometric</u>*, <u>biochemical</u>, <u>clinical</u>, and <u>dietary</u> assessments, • list common sources and methods for gathering anthropometric, biochemical, clinical, and dietary data, • describe correct measurement techniques, • assess several diets using the 24-hour recall form and the *Food Guide Pyramid,* • describe the levels of Nutrition Intervention and • describe conditions such as anemia, obesity, lead poisoning, homelessness, drug abuse, smoking and domestic violence and suggestions to address these.
	*Words that you may not know are **underlined.** Definitions for these words can be found in the **Glossary** at the end of the module. (Note: Words are only underlined the first few times they appear in the text.)*

Assessment

Definition	Assessment is the evaluation of the WIC participant's nutrition or health status.
Type of Assessment	There are 4 different types of assessments that WIC staff use to determine if an applicant has a nutritional risk. They are: • anthropometric, • biochemical, • clinical, and/or • dietary. You will use these assessments at enrollment and certification appointments.
Description of Assessments	The chart on the next page briefly describes these 4 assessments.

Assessment (continued)

Description of Assessments

<u>Anthropometric</u>:
- Evaluates a person's body, such as her/his:
  - ➤ height,
  - ➤ weight

- ***It is acceptable to accept measurements taken from a health care provider if they were collected no more than 60 days before the WIC Certification appointment.***

<u>Biochemical</u>:
- Evaluates what is in a person's blood, such as:
  - ➤ iron

- ***It is acceptable to accept blood test results if they were taken no more than 90 days before the WIC Certification appointment.***

<u>Clinical</u>:
- Evaluates a person's:
  - ➤ health history,
  - ➤ current medical condition, and
  - ➤ health/lifestyle habits.

- You will gather information from:
  - ➤ referrals from health care providers,
  - ➤ forms filled out by the applicant,
  - ➤ interviews of the applicant or parent/caregiver, and/or
  - ➤ observations of applicant (appearance, interactions with others).

<u>Dietary</u>:
- Identifies what the applicant usually eats and drinks using:
  - ➤ a diet history/24-hour recall,
  - ➤ food record/diary, and/or
  - ➤ food frequency questionnaire/checklist,
    and then compares this information to guidelines for a healthy diet.

Anthropometric Assessment

In the WIC program, anthropometric measurement consists of measuring height and weight. How a child grows is an important indicator of health. You can monitor the growth of infants and children by taking a series of measurements over time. You can also evaluate the weight of pregnant and postpartum women.

When performing a measurement, it is critical that each one is precise because:

- We use the measurements to establish eligibility in the WIC program.
- Errors can also lead to the wrong risk determination and inappropriate counseling at follow-up visits.
- The Centers for Disease Control and Prevention (CDC) relies on WIC for a picture of the nation's health.

Checklist for weighing using the mechanical infant scale

1. Balance the scale by moving upper and lower weights to zero. Scale is balanced if marker is centered. Make sure scale is away from wall.
2. Remove all clothing from infant/child weighed on infant scale down to a dry diaper or underwear.
3. Place clean cloth or paper towel on scale. Discard after use.
4. Position infant/child in the center of scale with arms at sides.
5. Read weight to the nearest ¼th pound.
6. Record measurement in the medical screen of the AIM system.
7. Return upper and lower weights to zero.

Checklist for weighing using the infant digital scale

1. Turn the scale on at the off/on switch. The display will show "SECA" and then "0:00." Make sure switch is in the "pounds" mode rather than the "kilograms" mode.
2. Remove all clothing from infant/child down to a dry diaper or underwear.
3. Place a clean cloth or paper towel on scale. Discard after use.
4. Position infant/child in center of scale with arms at sides.
5. Record measurement in the medical screen of the AIM system.

Checklist for weighing women and children with a balance scale

1. Remove the child's outer clothing and shoes.
2. Place the scale in the "zero" position before the child steps onto the scale.
3. Have the child stand still with both feet in the center of the platform.
4. Read the measurement to the nearest ¼th pound (100 gm) and record in the medical screen of the AIM system.

Anthropometric Assessment (continued)

Checklist for weighing using the floor model digital scale

1. Turn scale on at the off/on switch. The display will show "SECA" and then "0.0." Make sure switch is in the "pounds" mode rather than the "kilograms" mode.
2. Have individual remove shoes, jackets, purses, or any other heavy items of clothing
3. Place clean cloth or paper towel on scale. Discard after use.
4. Have individual stand in center of the scale.
5. Record measurement in the medical screen of the AIM system.

Checklist for measuring using the infant measuring board

1. Slide adjustable guide or triangle-shaped wood heel-board so it is wide enough to lay infant/child between the head and foot boards.
2. Remove booties or shoes and hair barrettes from infant/child before taking measurement.
3. Place clean cloth or paper towel on measuring board. Discard after use.
4. Lay infant/child face up on measuring board with eyes facing the ceiling.
5. Infant/child's body must be straight and lined up with the board.
6. Use one of your hands to hold the knees and/or legs. Completely straighten the infant/child's hips and knees. Use your other hand to slide wood triangle or plastic movable board firmly against the heels with the toes pointing straight up.
7. Read length to the nearest 1/8th inch at the "Read Here" red arrow.
8. Record measurement in the medical screen of the AIM system.

Checklist for measuring using the wall-mounted measuring unit

1. Have individual remove shoes, coats, and jackets before measuring.
2. Loosen the adjustable screw on the side of measuring board. Hold plastic headpiece by the handle and pull upward so individual can fit underneath.
3. Have individual stand as straight as possible, with back toward the wall and heels slightly apart.
4. Lower headboard until it touches the crown of the head firmly. Make sure the board is not just resting on the hair but actually touching the top of the head.
5. Tighten the adjustable screw on the side of the board until it stops. Have individual walk away from under the board.
6. Read the height to the nearest 1/8th inch at the "Read Here" red arrow.
7. Record measurement in the medical screen of the AIM system.

Anthropometric Assessment (continued)

|	
Definition	<u>Anthropometric assessment</u> is checking to see if a person's body measurements, such as height/length and weight are within a desirable range of values.
Correct Measurement Techniques	While working at a WIC site, you may get height and weight measurements from a health care provider that do NOT seem accurate. When this happens, you will need to weigh and measure the person yourself to get correct measurements. Accurate measurements are important to: • assess growth of pregnant women, infants, and children, and • provide participants with appropriate nutrition education
Measuring Height	Measuring **height** is measuring a person when s/he is standing. To measure height, follow the guidelines on the next page.

Anthropometric Assessment (continued)
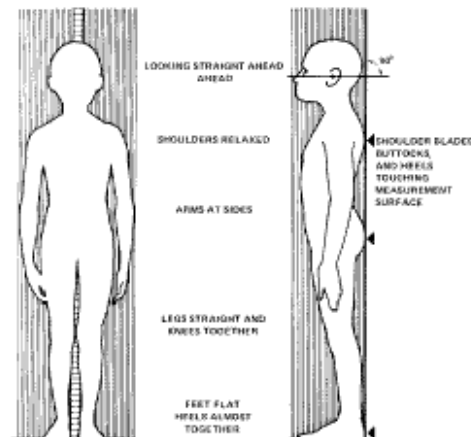
Measuring Height

Use the following equipment:
- A measuring board with a 6 inches or wider headboard. See diagram below.
- Do NOT use the measuring rods on platform scales to measure height.
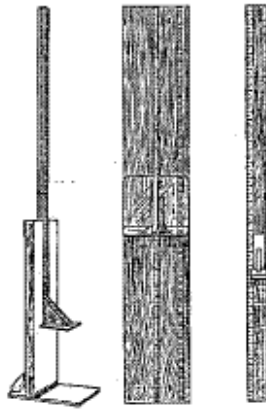
Have the person (adult or child) being measured do the following:
1. Remove shoes, hat, and/or heavy outer clothes, such as a coat.

2. Stand tall and straight as in the diagram below.

Anthropometric Assessment (continued)

Measuring Length	Measuring **length** is measuring a person when s/he is lying down.

Infants and children **less than 24 months old must be measured lying down.**

If a child is older than **24 months** and cannot stand unassisted, their length (not height) may still be measured and this should be recorded properly in the AIM system.

Once you start measuring and recording a child standing up, you should continue to measure her/him this way.

Note: The AIM system assumes children over 24 months old were measured standing up. |
| **Measuring Weight** | Weight is measured:
- standing up for adults and older children,
- sitting down for young children, or
- lying down for infants less than 24 months.

To measure weight, follow the guidelines on the next pages. |

Anthropometric Assessment (continued)

Measuring Weight: Standing Up

Use the following equipment:
- A beam balance scale
  - ➢ with a platform and non-detachable free-sliding weights,
  - ➢ marked in increments of not more than four ounces, or 1/4 pound, or 100 grams, and
  - ➢ **in balance** (reads "0" when all the weights are moved to the zero position).
- Do NOT use spring balance scales, such as bathroom scales.

Have the person do the following:
1. Remove heavy clothing, such as jackets, sweaters, belts, and shoes.

2. Put aside purse, bag, or any items s/he may be carrying.

3. Stand in the center of the platform with arms hanging at her/his sides. See diagram below. She should not touch the wall or the staff person.

Anthropometric Assessment (continued)

Measuring Weight: Standing Up (continued)

Staff person will:

1. Move the large counterbalance weight on the main beam away from the zero position until the indicator drops showing that a little too much weight has been added.
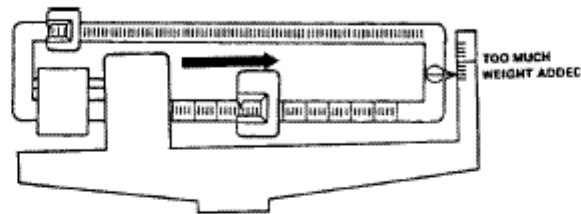
2. Back off to the nearest stop until the indicator rises, showing that a little too much weight has been removed.
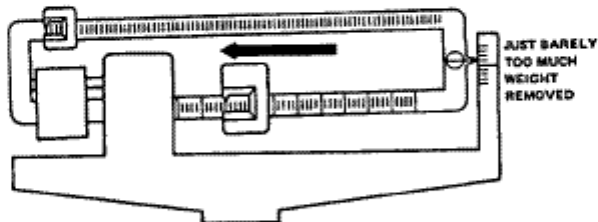
3. Repeat this procedure with the fractional beam until the indicator rests in the exact center.
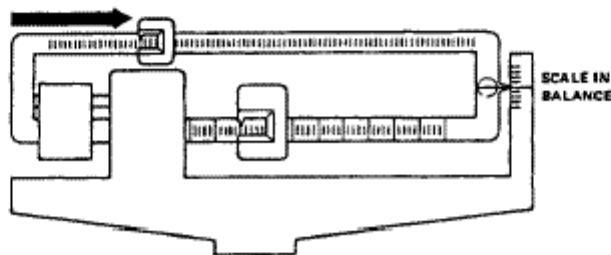
Anthropometric Assessment (continued)

Measuring Weight: Standing Up (continued)

Staff person will:

4.   Read the weight to the nearest:
- **Pound** or **kilogram for adults** and
- **¼ pound** or **kilogram for children.**

5.   Immediately write down the person's weight and any circumstances that might have affected the measurement, such as "child had cast on arm."

6.   Return the weights to the zero position.

Anthropometric Assessment (continued)

Measuring Weight: Lying Down (continued)

Staff person will:

1. Make sure the child's hands are kept inside the weighing tray. Do NOT allow child to hold onto sides of scale or onto a person. (You may want to give the child a lightweight item such as a sticker.)
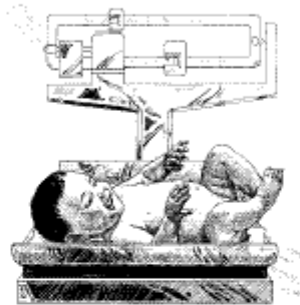
2. Move the main beam weight to the right, away from the zero position, until the indicator arm drops just a little below the middle. This means that a little too much weight has been added.

> TOO MUCH
> WEIGHT ADDED
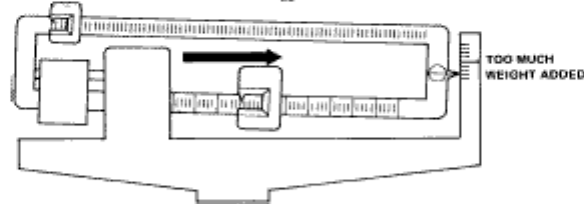
3. Move the main beam weight slowly back to the left, toward the zero position, to the nearest stop. The indicator should rise above the middle. This means that a little too much weight has been removed.
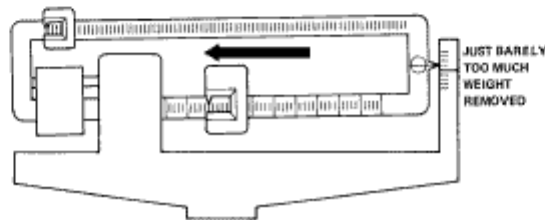
> JUST BARELY
> TOO MUCH
> WEIGHT
> REMOVED

Anthropometric Assessment (continued)

Measuring Weight: Lying Down (continued)

4. Move the fractional beam weight to the right, away from the zero, until the indicator arm is exactly in the middle.

SCALE IN
BALANCE
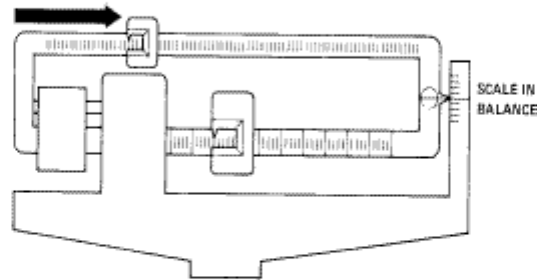
5. Read the weight to the nearest **pound and ounce** or **gram**.

6. Immediately write down the measurement and any circumstances that might have affected the measurement, such as "child had on a wet diaper".

7. Return the weights to the zero position at the left-hand side of the scale and throw the disposable paper sheet away.

Anthropometric Assessment (continued)

Measuring Anxious or Uncooperative Children	Sometimes a child may get anxious and upset during measurements. When this happens, s/he may not cooperate and may refuse to stand or lie down.
Ways to Calm the Child	You may want to try the following: • Be patient and calm. • Encourage the parent/caregiver to stay calm and to comfort the child, rather than scolding or threatening the child. • Have the parent help you measure the child. • If possible, measure another, more cooperative child while the upset child is watching. • Offer a reward, such as a sticker. • Wait a few minutes before measuring the child; this may help her/him become more relaxed.
Uncooperative Children	Sometimes the child will not cooperate at all. If this happens, you may: • Use length for a child who refuses to stand. • Weigh a child while in the parent's/caregiver's arms. (Weigh the parent alone and then with the child. Subtract the parent's weight from the combined weight to get the child's weight.) In these situations always make sure to record what happened. If the child is impossible to manage, do NOT measure the child at all and document the reason in AIM.

Anthropometric Assessment (continued)

Body Mass Index	<u>Body Mass Index</u> (BMI) is an indicator of nutritional status. BMI is calculated by taking a person's weight and dividing it by her/his height squared. $$BMI = \frac{Weight}{Height^2}$$ Body Mass Index is used to see whether a person's weight is appropriate for her/his height. It is often used to see if an adult or child is overweight. It is also used to determine the weight gain ranges for pregnant women. You will NOT need to calculate BMI. When you enter a participant's height and weight into AIM, AIM will automatically calculate the BMI.
Percentiles	<u>Percentiles</u> are a series of curves on growth charts that show the distribution of children with certain body measurements at certain ages. WIC staff enters age, weight, and height/length information into AIM to get percentiles. Staff then uses these percentiles to assess an infant's or child's physical growth. A child usually stays in the same percentile as s/he grows. A child's whose measurements are below the 10th percentile, above the 90th percentile, or suddenly change in percentile may have a nutritional risk.
Learning Activity 1	To learn more about how to do anthropometric assessments such as: • measuring height/length and • weighing, you may want to try **Learning Activity 1** found at the end of this module.

Biochemical Assessment

Definition	<u>Biochemical assessment</u> is checking to see if a person's blood contains normal levels of nutrients.
Lab Manual	Please refer to your WIC Lab Manual for the procedure of collecting a blood sample. Please ask your supervisor for your WIC site copy.
Hemoglobin Test	Arizona WIC uses a biochemical assessment to check for iron deficiency (<u>anemia</u>). This is called a: • <u>hemoglobin test</u> <u>A hemoglobin (Hgb) test</u> measures the amount of hemoglobin in the blood. (Hemoglobin is the iron-containing molecule that carries oxygen to the cells of the body.) Hemoglobin is measured as grams per deciliter of blood or gm/dl, such as a value of 12 gm/dl.
Learning Activity 2	To learn more about biochemical assessment, you may want to try **Learning Activity 2** found at the end of this module.

Clinical Assessment

Definition	<u>Clinical assessment</u> is checking to see if a person has a physical or medical condition that increases her/his risk for developing malnutrition and/or poor health.
Methods	Clinical assessment may include assessing a person's • health history (such as past pregnancy history for a pregnant woman or chronic infections that require medication for a child), • current medical condition (such as diabetes, high blood pressure, allergies, or birth defects that affect eating), and • health/lifestyle habits (such as alcohol, drug, or tobacco use).
Learning Activity 3	To learn more about clinical assessment, you may want to try **Learning Activity 3** found at the end of this module.

Dietary Assessment

Definition	**24-Hour Recall/Diet History** is a record of what and how much a person ate and drank during 24 hours. It may be completed by: • the participant or • a WIC staff person
Method Used at WIC	**24- Hour Recall** is the dietary intake method most often used in the WIC program. Using the Food Guide Pyramid, you will document in AIM the results of your assessment.
Learning Activity 4	To learn more about dietary assessment, you may want to try **Learning Activity 4** found at the end of this module.
Learning Activity 5	To learn how anthropometric, biochemical, clinical, and dietary information are used together to assess a participant, you may want to try **Learning Activity 5** found at the end of this module.

Sample 24-Hour Recall Form -
The following page shows a sample 24-hour recall form. The 24-hour recall will be used to conduct a Dietary Assessment in AIM.

Daily Food Guide
Participant Name_____**Date**

24-Hour Recall

Please write down all food and drink for one complete day, including snacks.
Sample:

2 cup   Orange Juice

Morning: Evening:

____ _____   _____ _____

____ _____   _____ _____

____ _____   _____ _____

____ _____   _____ _____

____ _____   _____ _____

Afternoon:
____ _____   Is this a typical day's eating
                                                             pattern? Y or N

____ _____

____ _____   Additional comments (i.e.,
                                                             special diets, allergies)

____ _____

____ _____

Daily Food Guide

Guidelines for Using the 24-Hour Recall Method

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1. Instructing the participant:
- Explain that the information will be used to see if the participant's diet meets her/his nutritional needs.

- Have the participant write down everything s/he ate and drank yesterday, from the time s/he got up until s/he went to bed for the last time:
  - ➢ **Amount of food** actually eaten (not what was put in the dish)
  - ➢ **Time** at which the food was eaten

- Remind the participant to write down **everything eaten, including**
  - ➢ Snacks between meals,
  - ➢ All drinks, and
  - ➢ Items such as butter, jelly, sugar, or salad dressing.

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2. Checking the form or filling out the form for the participant:
- *Ask open-ended questions.* For example, "What was the first thing you ate or drank yesterday? may be used. Avoid using terms like *breakfast, lunch or dinner.*

- **Use food models and measuring cups/spoons** to get information about the amounts actually eaten. Do NOT use terms such as *bowl, glass, dish, piece* or *spoonful.*

- Ask how the food was **prepared and/or served**. For example, *"1 chicken drumstick (fried in shortening, no flour).'*

- Ask about the **type** of food and drink. For example, a participant may say "*orange juice"* when s/he had Hi-C®.

Dietary Assessment (continued)

Guidelines for Using the 24-Hour Recall Method
(continued)

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2. Checking the form or filling out the form for the participant (continued):
- Ask about any **extra foods eaten**, such as bread, tortillas, salad, salad dressing, vegetables, beverages, and desserts. Also ask about snacks and beverages.

- Write down **what is in a mixed food**. For example, for a cheese sandwich you may write, *"2 slices whole wheat bread, 2 ounces American cheese, and 2 teaspoons mayonnaise."*

- **Do NOT express approval or disapproval about the food eaten**. People will tell you what they think you want to hear rather than what they actually ate.

- **Give the participant enough time to answer**. People are not used to remembering what they ate.

- **Focus on getting information about the participant's diet.** Do NOT change the subject. Avoid interruptions.

- Ask the participant **if this was a typical day**. For example, *"Was this a normal eating day for you?" "Did you eat more (less) food than usual because of a special occasion (being sick)?"* Note any changes.

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3. Assessing the foods eaten by the participant:
- **Identify what group (9 groups) each food belongs to**. For example, "orange juice" belongs to the "Vitamin C-Rich Fruits and Vegetables" group.
- **Determine the number of servings** eaten for the food. For example, 12 ounces of orange juice is 2 servings (since 1 serving of orange juice is 6 ounces).
- **Circle the number of servings** for each food in the appropriate food group on the Food Guide Pyramid and record in AIM.

Dietary Assessment (continued)

Guidelines for Using the 24-Hour Recall Method
(continued)

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*3. **Assessing the foods eaten by the participant (continued):***

- Write down the **total number of servings eaten from each food group** at the bottom of each column in the "Servings Eaten" or "Total" section of the form.

- **Compare the totals to the "Minimum Servings Needed"** for the category of the participant. The difference between servings needed and servings eaten can be filled in. If the participant ate more then the minimum servings needed, the difference will be a *plus* number. If s/he ate fewer than the minimum servings needed, it will be a *minus* number. If the participant had exactly what is recommended, the difference will be zero. (See example below.)

- **Show the participant the differences between the suggested number of servings and the number actually eaten.**

- **Write** down any comments, such as:
  - ➢ cultural beliefs that may affect diet,
  - ➢ current situations that may affect food intake (such as homelessness, going through a divorce, having serious medical problem),
  - ➢ vegetarianism, and/or
  - ➢ deficiencies in the diet.

Dietary Assessment in AIM

The following information, taken directly from WIC 101/AIM Training Manual, describes how to complete a dietary assessment in AIM. The paper screening tool that you will use is included.

1. Select the Diet Assess radio button.

- If no risks were identified for the participant, the Diet Assessment can be used to identify the **"Failure to Meet USDA/DHHS Dietary Guidelines for Americans"** risk. Diet Assessment is also valuable in identifying any eating patterns that might lead to anemia or other nutritional deficiencies.

The **print** icon will allow you to print out the Diet Assessment to review with the client.

Input the appropriate number of servings based on the client's 24-hour recall.

AIM will automatically complete these fields based on the values entered into the Food Group fields.

2. To recalculate for any dietary risks based on the new information entered, you would click on the Health History button to return to the Health History window and then click on the Calculate Risks button.

The Arizona WIC Program Dietary Assessment Tool is used to collect information from the client so that it can be inputted into AIM to determine dietary risks and create education outputs for the client.

The following page is another example of the Paper Screening Tool

Daily Food Guide
Participant Name_____Date

<div align="center">

24-Hour Recall

</div>

Please write down all food and drink for one complete day, including snacks.
<u>**Sample**</u>**:**

<u>2 cup</u>   <u>Orange Juice</u>

Morning: Evening:

____ _____   _____ _____

____ _____   _____ _____

____ _____   _____ _____

____ _____   _____ _____

____ _____   _____ _____

Afternoon:

____ _____   Is this a typical day's eating
                                                             pattern? Y or N

____ _____

____ _____   Additional comments (i.e.,
                                                          special diets, allergies)

____ _____

____ _____

Daily Food Guide

The WIC Program Dietary Assessment Tool

1. Have the participant or authorized representative complete the 24-hour recall. Remind the client to list all food and drink consumed in a one-day period, including amounts of each item and including any snacks.

2. Staff should review the 24-hour recall for completeness and should prompt the participant/authorized representative for missing serving sizes and missing condiments.

3. Compare the 24-hour recall with the Arizona WIC Program Dietary Assessment Serving Sizes list and to the Combination Foods list. Shade in each serving of a food group on the Food Guide Pyramid. Note: for the fats, oils and sweets group, you will need to tally the total number of servings in the tip of the pyramid. **Remember to add 1 serving of fat for each serving of cheese, fried foods, chips, ice cream, and whole milk consumed.**

4. Note the total number of shaded squares for each food group of the Food Guide Pyramid. The outcome of the Diet Assessment may be one of the following:

    *   If a client is consuming less than the minimum number of servings for any of the following groups: grains, vegetables, fruits, milk, or meat group, then the participant will be assigned Risk 401, Inadequate Diet, and should be counseled immediately.
    *   If the client is consuming more than the maximum number of servings for any one of the same food groups (grains, vegetables, fruits, milk, or meat group), a risk will not be assigned but appropriate nutrition education should occur.
    *   If a participant is consuming more fats, oils, and/or sweets than are recommended, then Risk 401 will be assigned and the client should be counseled accordingly.
    *   If a client is consuming the recommended amounts of all food groups, then congratulate the client. Risk 401 will not be assigned.

IMPORTANT NOTES:

If a participant answers 'no' to the question, "Is this a typical day's eating pattern?" instruct staff to ask the participant what needs to be added or deleted to make this representative of a typical day.

On the COMBO Foods list, the cut-off for determining a fat serving is 5g of fat. For example, Luncheon Meat – Salami was not given a fat serving because a serving only has 3g of fat.

Meat servings for children were expanded to reflect 2-3 servings instead of just 2 servings. This was a joint decision that was made by the team to possibly help with our state's extremely high anemia rates. Some footnotes were added on the serving size sheet to address the different amounts.

Arizona WIC Program	Dietary Assessment Serving Sizes	
Food Group	**Serving Sizes for Children 2-4 yrs***	**Serving Sizes for Teens and Women**

Bread, Cereal, Rice and Pasta*
 	
Counseling Tips:
 	
  * Recommend at least 3 of the servings be whole or mixed grains.
 	
  ** May cause choking in 2-3 year old children.
	Servings Per Day: 6
	
	1 slice bread
	½ C cooked cereal
	¾ -1 C cold cereal
	½ C rice or pasta
	½ bun or English muffin
	1 small tortilla
	2-3 graham crackers
	3 C popcorn**
	1 small biscuit, cornbread or muffin
		Servings Per Day:
		  Postpartum Women>18: 6-11
		  Pregnant Women/Teens: 9-11
		
		 1 slice bread
		 ½ C cooked cereal
		 1 oz cold cereal
		 ½ C rice or pasta
		 ½ bun or English muffin
		 1 small tortilla
		 2-3 graham crackers
		 3 C popcorn
		 1 small biscuit, cornbread or muffin

Vegetable	Servings Per Day: 3
	
	½ C chopped raw or cooked vegetables
	1 C leafy greens
	¾ C vegetable juice (100% juice)
	1 medium potato
		Servings Per Day:
		  Postpartum Women>18: 3-5
		  Pregnant Women/ Teens: 4-5
		
		½ C chopped raw or cooked vegetables
		1 C leafy greens
		 ¾ C vegetable juice (100% juice)
		1 medium potato

Fruit	Servings Per Day: 2
	
	¾ C juice (100% juice, no sugar added)
	1 medium piece of fruit (apple, orange, banana, pear, etc.)
	½ grapefruit
	2 small kiwifruit or plums
	½ medium mango
	½ C melon pieces
	½ C canned or chopped fruit
	¼ C dried fruit (ie: raisins)
		Servings Per Day:
		  Postpartum Women>18: 2-4
		  Pregnant Women/Teens: 3-4
		
		¾ C juice (100% juice, no sugar added)
		1 medium piece of fruit (apple, orange, banana, pear, etc.)
		½ grapefruit
		2 small kiwifruit or plums
		½ C melon pieces
		½ C canned or chopped fruit
		¼ C dried fruit (i.e. raisins)

Arizona WIC Program	Dietary Assessment Serving Sizes	
Food Group	**Serving Sizes for Children 2-4 yrs***	**Serving Sizes for Teens and Women**

Milk, Yogurt and Cheese	Servings Per Day: 4
	
	½ C milk or yogurt
	½ C soy milk, calcium fortified
	¾ oz natural cheese
	1 oz processed cheese
	1 C cottage cheese
	½ C pudding
	½ C frozen yogurt
		Servings Per Day:
		  Postpartum women >18:3-4
		  Pregnant Women/Teens:
		  3-4
		
		1 C milk or yogurt
		1 C soy milk, calcium fortified
		1½ oz natural cheese
		2 oz processed cheese
		2 C cottage cheese
		1 C pudding
		1 C frozen yogurt

Meat, Poultry, Fish, Dry Beans, Eggs and Nuts
 	
Counseling Tips
   ***** Amounts from this group should total 5 oz/ day for 4-6 year olds and about 3.5 oz/day for 2-3 year olds.
 	
   ***** Amounts from this group should total 7 ounces a day.
 	
   ****** **May cause choking in 2-3 year old children.**
	Servings Per Day: 2-3****
	
	2-3 oz of lean meat, poultry or fish
	Counts as 1 oz lean meat:
	½ C cooked dry beans
	2 Tbs peanut butter*****
	1 egg
	¼ C tuna or salmon
	2 slices bologna or luncheon meat
	½ C tofu
	1/3 C nuts/seeds ******
		Servings Per Day: *****
		  Postpartum Women
		  >18: 2-3
		  Pregnant women/ Teens: 2-3
		
		2-3 oz of lean meat, poultry or fish
		Counts as 1 oz lean meat:
		½ C cooked dry beans
		2 Tbs peanut butter
		1 egg
		¼ C tuna or salmon
		2 slices bologna or luncheon meat
		½ C tofu
		½ C nuts/seeds

Arizona WIC Program Dietary Assessment Serving Sizes		
Food Group	**Serving Sizes for Children 2-4 yrs***	**Serving Sizes for Teens and Women**

Fats, Oils and Sweets (Use Sparingly)	Not to Exceed Servings Per Day: 7
	
	Fat:
	1 tsp butter, margarine or mayonnaise
	2 Tbs sour cream
	1 oz cream cheese
	Add 1 serving fat for each of these foods: cheese, fried food, chips, ice cream, whole milk
		Not to Exceed Servings Per Day:
		  Postpartum Women >18: 10
		  Pregnant Women/ Teens: 10
		
		Fat:
		1 tsp butter, margarine or mayonnaise
		2 Tbs sour cream
		1 oz cream cheese
		Add 1 serving fat for each of these foods: cheese, fried food, chips, ice cream, whole milk

	Sugar (count as 1 svg): 6 oz cola ½ C drink or Kool Aid 1 oz chocolate bar ¼ C gelatin ½ C ice cream/frozen yogurt ½ piece cake or pie	Sugar (count as 1 svg): 12 oz cola 1 C fruit drink or Kool Aid 2 oz chocolate bar ½ C gelatin 1 C ice cream/frozen yogurt 1 piece cake or pie

      *Children 2 to 3 years old need the same variety of foods as 4 to 6 year olds, but may need fewer calories. A good estimate of a serving for a 2 to 3 year old child is about 2/3 of what counts as a regular Food Guide Pyramid serving. Meat servings for children were expanded to reflect 2/3 of what counts as a regular Food Guide Pyramid serving. Meat servings for children were expanded to reflect 2-3 servings instead of 2 servings to address Arizona's high anemia rates.

References:
The Food Guide Pyramid. United States Department of Agriculture, Human Nutrition Service, Home and Garden Bulletin 252, 1992.
Tips for Using the Food Guide Pyramid for Young Children 2 to 6 Years Old. United States Department of Agriculture, Center for Nutrition Policy and Promotion, Nutrition Insights #11, March 1999.
Using the Food Guide Pyramid: A Resource for Nutrition Educators. United States Department of Agriculture, Center for Nutrition Policy and Promotion, 1998.

Arizona WIC Program – Dietary Assessment Serving Sizes – Combination Foods								
Food	Bread	Vege-table	Fruit	Milk	Meat	Fat	Sugar	Cals
½ C beef stew	1	1			2			220
5 oz Burrito, Bean	2				2	2		358
5 oz Burrito, Beef	2				3	2		460
Cheeseburger (small) on bun	2			½	2	2		320
2" slice cheesecake	1					4		257
6 chicken nuggets	1				2	3		300
1 chimichanga	2				2	4		425
1 enchilada, beef	2							319
1 enchilada, cheese	2							319
1 small french fries		1						210
1 sl. luncheon meat – bologna								90
1 sl. luncheon meat– pickle loaf								80
1 sl. luncheon meat – salami								40
2 C macaroni & cheese	2			1		2		358
1 C milkshake				1		1	1	264
1 C noodle soup – chicken	1				1			74
2 C pasta salad	1	1				3		240
1/8 10" pizza, cheese	1			1				140
2 C potato salad		1				3		358
1 C sopa seca de arroz/ rice soup	3							375
1 C sopa seca de fideo/ noodles	2							327
1 C stir fry, chicken & pasta	2	2			2			300
6" sub sandwich (with meat)	2	1**			2	1		456
1 tostada	1	1			1	2		292
8 oz yogurt, fruited, low-fat				1			3	239

Common Conditions Affecting Nutrition/Health Status

Conditions May Affect Nutrition/ Health Status	When assessing an applicant/participant, you may identify a physical or medical condition that can increase the person's risk for poor nutrition and/or health. These are called Risks in AIM.
Risk Chart	The chart below and on the next pages describes some common Risk codes identified at WIC and possible suggestions to address them.

Nutrition/Health Conditions & Suggestions

Condition/Description	Suggestions
Anemia is a condition in which there are low iron levels in the blood. Symptoms may include: • poor appetite, • tiredness, • weakness, • developmental delays, • learning problems, and • growth retardation.	• Eat iron-rich foods (such as meats, spinach, dried beans, and iron-fortified cereals for infants). • Eat iron-rich foods along with Vitamin C-rich foods (such as orange juice, tomatoes, and broccoli). Vitamin C helps the body with iron absorption. • Cook foods in cast iron cookware. • Do NOT drink tea or coffee when eating iron-rich foods. They block iron absorption.
Homelessness- Homeless people often do not get regular and/or nutritious meals.	Refer participant to: • local shelters and/or • agencies that help with housing.

Common Conditions Affecting Nutrition/Health Status (continued)

Nutrition/Health Conditions & Suggestions

Condition/Description	Suggestions
Overweight (>90th percentile weight for height for children or BMI>26.0 for adults) may be due to: • overeating, • lack of exercise, • social and/or emotional factors, • slower than normal metabolism, and/or • genetics. Obesity may cause or complicate diseases, such as diabetes and heart disease.	• Dieting is NOT recommended if pregnant. • Eat a nutritious diet. Use Food Guide Pyramid. • Drink water for thirst. • If eating "fast foods," choose low-fat foods and limit quantities. • Be active.

Smoking
In pregnant women, smoking can result in:
• miscarriage,
• premature birth,
• increased risk of infant death in the 1st year,
• slowed fetal growth,
• low birth weight, and/or
• problems during delivery.
 	
Smoking and second-hand smoke can also cause breathing problems and cancer.
	• Refer participant to local smoking cessation programs.
	• Encourage the participant to:
	  ➤ Cut down the number of cigarettes smoked each day.
	  ➤ Take fewer puffs on each cigarette.
	  ➤ Eat low-calorie, nutritious snacks instead of smoking.
	  ➤ Get support from family and friends.

Nutrition and Risks

Assignment of Risks	The information that you enter into AIM allows the computer to assign risks to the client.
Chart of Levels of Intervention	A list of the services provided and staff providing these services at each level WIC employment are described in the chart on the next page. **WIC CNWs provide Level 1 and 2 interventions.**

Levels of Intervention

The following table lists levels of intervention and which staff member would provide service to the client.

Level	Possible Services Offered	WIC Staff
1	• Routine WIC services (limited assessment and nutrition education)	WIC CNW
2	• Routine WIC services • Additional nutrition education • WIC nutritionist/RD referral for high- risk education	WIC CNW
3	• Assessment • Nutrition education • Individual nutrition education plan	WIC Nutritionist or Registered Dietitian (RD)
4	• Assessment and monitoring • Making and tracking of referrals • Modification of the WIC food package where needed • Reinforcement of Medical Nutrition Therapy (MNT) care plan	WIC Nutritionist or Registered Dietitian (RD)

Indicators of Nutritional Need

Nutritional Need	A <u>nutritional need</u> is a health problem or condition that puts a person at nutritional risk. Nutritional needs are grouped into 4 categories: • Anthropometric, • Biochemical, • Clinical, and • Dietary.
Assignment of Risks	An assignment of a risk is information about a person's body measurements, blood or urine levels, health history, medical condition, living situation, or eating behaviors that shows s/he is at nutritional risk. When you assess an applicant or participant, you may identify an anthropometric, biochemical, clinical, or dietary indicator of nutritional need.
Risk Codes	WIC has developed a risk code system listing indicators of nutritional need and their corresponding AIM codes and levels of nutrition intervention for each participant category.

The Risk Code chart that follows lists Risk codes identified at WIC, the priority indicated and if they require referral to the WIC nutritionist.

Arizona WIC Risk Table FY 2004

X: Requires documentation by a Physician or Primary Care Provider.
XX: Requires documentation by a Physician, Primary Care Provider, or Nutritionist.
XXX: Requires documentation by Physician, Primary Care Provider, Nutritionist, or Community Nutrition Worker (CNW)
XS: Self-reported by the applicant/participant/caregiver as a diagnosis received from a Physician.

Code	Risk Name	Priority-PG	Priority-BF	Priority-PP	Priority-Infant	Priority-Child	Doc	Mandatory Nutritionist Referral
101	Underweight (Woman)	1	1	3,4,5,6				X
103	Underweight or At-Risk of Becoming Underweight (Infants & Children)				1	3		
111	Overweight (Women)	1	1	6				
113	Overweight (Children 2-5 years of age)					3		
121	Short Stature				1	3		
131	Low Maternal Weight Gain	1						
132	Maternal Weight Loss	1						
133	High Maternal Weight Gain	1	1	6				
134	Failure to Thrive				1	3	XS	X
141	Low Birthweight (children less than 24 mos.)				1	3		
142	Premature Infant				1			X
151	Small for Gestational Age				1	3	XS	
152	Low Head Circumference				1	1	XXX	
153	Large for Gestational Age				1			
201	Anemia	1	1	3	1	3		X
211	Lead Poisoning	1	1	3	1	3	XS	
301	Hyperemesis Gravidarum	1					XS	
302	Gestational Diabetes	1					XS	X
303	History of Gestational Diabetes	1	1	6			XS	
311	History of Premature Delivery	1	1	6				
312	History of Low Birth Weight	1	1	6				
321	History of Fetal or Neonatal Loss	1	1	6				
331	Pregnancy at a Young Age	1	1	3				
332	Closely Spaced Pregnancies	1	1	3				
333	High Parity and Young Age	1	1	3				
334	Inadequate Prenatal Care	1						
335	Multi-fetal Gestation	1	1	6				
336	Delayed Uterine Growth	1					XS	

Code	Risk Name	Priority-PG	Priority-BF	Priority-PP	Priority-Infant	Priority-Child	Doc	Mandatory Nutritionist Referral
337	History of Large for Gestational Age	1	1	6			XS	
338	Pregnant Woman Breastfeeding	1						
339	History of Birth with a Congenital Defect	1	1	6			XS	
341	Nutrient Deficiency Disease	1	1	6	1	3	XS	X
342	Gastro-Intestinal Disorders	1	1	6	1	3	XS	
343	Diabetes Mellitus	1	1	6	1	3	XS	
344	Thyroid Disorders	1	1	6	1	3	XS	
345	Hypertension	1	1	6	1	3	XS	
346	Renal Disease	1	1	6	1	3	XS	
347	Cancer	1	1	6	1	3	XS	
348	Central Nervous System Disorders	1	1	6	1	3	XS	
349	Genetic & Congenital Disorders	1	1	6	1	3	XS	
350	Pyloric Stenosis				1		XS	
351	Inborn Errors of Metabolism	1	1	6	1	3	XS	
352	Infectious Diseases	1	1	6	1	3	XS	
353	Food Allergies	1	1	6	1	3	XS	
354	Celiac Disease	1	1	6	1	3	XS	
355	Lactose Intolerance	1	1	6	1	3	XX	
356	Hypoglycemia	1	1	6	1	3	XS	
358	Eating Disorders	1	1	6			XS	
359	Recent Surgery, Trauma, Burns	1	1	6	1	3	X	
360	Other Medical Conditions	1	1	6	1	3	XS	
361	Depression	1	1	6		3	XS	
362	Developmental Delays, Sensory or Motor Delays Interfering with the Ability to Eat	1	1	6	1	3	X	
371	Maternal Smoking	1	1					
372	Alcohol and Illegal Drug Use	1	1	3				
381	Dental Problems	1	1	6	1	3	XXX	
382	Fetal Alcohol Syndrome				1	3	XS	

Code	Risk Name	Priority-PG	Priority-BF	Priority-PP	Priority-Infant	Priority-Child	Doc	Mandatory Nutritionist Referral
401	Failure to Meet USDA/DHHS Dietary Guidelines for Americans	4	4	6		5	XXX	
402	Vegan Diet	4	4	6	4	5		
403	Highly Restrictive Diet	4	4	6	4	5		
411	Inappropriate Infant Feeding				4			
412	Early Introduction of Solid Foods				4			
413	Feeding Cow's Milk during the First 12 Months				4			
414	No Dependable Source of Iron After 6 Months of Age				4			
415	Improper Dilution of Formula				4			
416	Feeding Other Foods Low in Essential Nutrients				4			
417	Lack of Sanitation				4			
418	Infrequent Breastfeeding as Sole Source of Nutrients				4			
419	Inappropriate Use of Nursing Bottles				4	5		
420	Excessive Caffeine		4					
421	Pica	4	4	6		5		
425	Inappropriate Feeding Practices					5		
501	Possibility of Regression		4	7		5	XXX	
502	Transfer of Certification	0	0	0	0	0		
503	Presumptive Eligibility for PG Women	4						
601	Woman Breastfeeding an Infant at Nutritional Risk		1,2,4					
602	Breastfeeding Complications (BF)		1					
603	Breastfeeding Complications				1			
701	Infant up to 6 Months of Age Born to WIC Mother or WIC-eligible Mother				2			
702	Infant Being BF by a Woman at Nutritional Risk				1,2,4			
703	Infant Born to Woman w/ Mental Retardation, Alcohol, Drug Abuse				1		XS	
801	Homelessness	4	4	6	4	5		

Summary

Assessment	Assessment is the evaluation of the WIC participant's nutrition or health status. There are 4 different types of assessments used to determine nutritional risk. They are: • Anthropometric, • Biochemical, • Clinical, and • Dietary.
Methods for Gathering Data	The chart below lists methods for gathering anthropometric, biochemical, clinical, and dietary data.<table><tr><th>Type of Data</th><th>Methods</th></tr><tr><td>Anthropometric</td><td>• weighing • measuring length • measuring height</td></tr><tr><td>Biochemical</td><td>• taking a blood sample</td></tr><tr><td>Clinical</td><td>• referrals • forms • interviews • observations</td></tr><tr><td>Dietary</td><td>• a 24-hour recall/diet history • record in AIM</td></tr></table>

Summary (continued)

Anthropometric Assessment	Anthropometric assessment is checking to see if a person's body measurements such as height/length and weight are within a desirable range of values.
Correct Measurement	Correct measurement of height, length, and weight are important in: • assessing growth of pregnant women, infants, and children, and • providing appropriate nutrition education.
Body Mass Index	Body Mass Index (BMI) is weight/(height)^2. It is used to see if a person's weight is appropriate for her/his height.
Percentiles	Percentiles are a series of curves on growth charts that show the distribution of children with certain body measurements at certain ages. They are used to assess physical growth.
Biochemical Assessment	Biochemical assessment is checking to see if a person's blood or urine contains normal levels of certain chemicals or nutrients.
Clinical Assessment	Clinical assessment is checking to see if a person has a physical or medical condition that increases her/his risk for developing malnutrition and/or poor health.
Dietary Assessment	Dietary assessment is checking to see what and how much food and drink a person consumes and how these compare to dietary recommendations.

Summary (continued)

Dietary Intake Methods	There are several ways to find out what a participant typically consumes. The method that WIC uses is called a 24-hour recall/diet history.
Conditions Affecting Health/ Nutrition Status	Physical or medical conditions may affect a person's health/nutrition status. Common conditions include: • anemia, • recipient of abuse, • drug abuse, • homelessness, • overweight, and • smoking.
Risks	Assignment of risks is a system used by local agencies where each nutrition/health problem is assigned an intervention level 1-4.
Indicator of Nutritional Need	An indicator of nutritional need is information about a person, such as body measurements, blood or health history, medical condition, living situation, or eating behaviors, that shows s/he is at nutritional risk.

Glossary

anemia- Anemia is a medical condition in which there are not enough red blood cells to carry needed oxygen to the cells of the body.

anthropometric assessment- Anthropometric assessment is checking to see if a person's body measurements (usually height/length and weight) are at desirable values.

assessment- Assessment is the evaluation of the WIC participant's nutrition or health status.

biochemical assessment- Biochemical assessment is checking to see if a person's blood or urine contains normal levels of certain chemicals or nutrients.

Body Mass Index- Body Mass Index (BMI) is an indicator of nutritional status that is calculated by taking a person's weight and dividing it by her/his height squared. (BMI = Weight/(Height)^2)

clinical assessment- Clinical assessment is checking to see if a person has a physical, medical, or living condition that increases her/his risk for developing malnutrition and /or poor health.

dietary assessment- Dietary assessment is checking to see what and how much food and drink a person consumes and comparing this intake to dietary recommendations.

diet history- A diet history is a record of what a person eats and drinks on a typical day.

food record/diary- A food record/diary is a 2-7 day record of eating information such as the type and amount of food a person has eaten, the time of day the food was eaten, where the food was eaten, the person's mood while eating, the people present while the person was eating, and why the person ate the food.

hemoglobin test- A hemoglobin (Hgb) test measures the amount of hemoglobin in the blood. (Hemoglobin is measured as grams per deciliter of blood or gm/dl, such as a value of 12 gm/dl.)

indicator of nutritional need- An indicator of nutritional need is information about a person's body measurements, blood iron level, health history, medical condition, living situation, or eating behaviors.

Risk Code- A Risk Code is an indicator of nutritional need.

nutritional need- A nutritional need is a health problem or condition that puts a person at nutritional risk.

24-hour recall- A 24-hour recall is a record of what and how much a person ate or drank during 24 hours.

Progress Check

1. Match each type of assessment to its description.

Assessment	**Description**
____ Anthropometric	A. Evaluates a person's food intake.
____ Biochemical	B. Evaluates a person's health history, current medical condition, and health/lifestyle habits.
____ Clinical	C. Measures what is in a person's blood.
____ Dietary	D. Measures a person's body by taking measurements such as height, weight, and head circumference.

2. For each of the methods listed, write the type of data ("A" for anthropometric, "B" for biochemical, "C" for clinical, and "D" for dietary) that is gathered using the method.

    ____ 24-hour recall

    ____ hemoglobin test

    ____ interview of person regarding cigarette smoking habits

    ____ diet history

    ____ weight

Progress Check (continued)

3. Mark the following *TRUE* or *FALSE.*

    _____ At WIC, a tape measure may be used to measure length or height.

    _____ When measuring height, make sure the person being measured keeps her/his shoes on.

    _____ When measuring height/length, the person being measured should be standing up straight or lying down flat.

    _____ When measuring for height/length, repeat measurements until 2 measurements agree within ¼ inch.

    _____ A beam balance scale, not a spring balance scale (such as a bathroom scale), should be used for weighing.

    _____ Adults being weighed should remove heavy outer clothing.

    _____ A baby should always be weighed with her/his clothing and diaper.

    _____ A child may hold on to her/his mother if s/he is being weighed standing up.

    _____ An uncooperative child may be weighed while in the parent's/ caregiver's arms.

    _____ The Nutrition Risk codes assign one of 10 levels to each nutrition/ health problem.

4. List 3 methods to assess dietary intake.

Progress Check (continued)

5. List at least 3 common physical or medical conditions that can affect a person's nutrition or health status.

6. Using the Risk Codes, match the level of intervention with its description.

Level of Intervention		**Description**
_____ 1	A.	Assessment, nutrition education, including an individual nutrition education plan provided by a Registered Dietitian (RD)
_____ 2	B.	Assessment, monitoring, referrals, modification of food package, reinforcement of Medical Nutrition Therapy (MNT) care plan provided by a Registered Dietitian (RD)
_____ 3	C.	Routine WIC services and some additional nutrition education provided by the Community Nutrition Worker (CNW)
_____ 4	D.	Routine WIC services provided by WIC CNW

Learning Activities

The following activities are included and are recommended for interactive learning:

- Learning Activity 1: Anthropometric Assessments
- Learning Activity 2: Biochemical Assessments
- Learning Activity 3: Clinical Assessments
- Learning Activity 4: Dietary Assessments
- Learning Activity 5: Identifying the A, B, C, D's

Activity 1: Anthropometric Assessments

Learning Objectives

After completing this activity, the CNW will be able to:

- measure a participant's height/length, and
- weigh a participant.

Instructions

1. Observe a co-worker adjusting a scale so it balances at "0."

2. Observe a co-worker weigh and measure height/length for:
    - an infant,
    - child, and
    - a woman.

3. Using the guidelines for correct measurements described in this module, weigh and measure the height of several co-workers.

    For weight, repeat measuring until 2 readings agree within ¼ pound or 100 grams of each other.

    For height, repeat measuring until 2 measurements agree within ¼ inch of each other.

4. Once you feel comfortable measuring an adult, weigh and measure the height/length of:
    - an infant, and
    - a child.

Activity 1: Anthropometric Assessments
(continued)

**Instructions
(continued)**

5. For weights lying down, repeat until 2 readings
    agree within ½ ounce or 10 grams of each other.

6. Have your mentor or supervisor observe your
    technique.

Activity 2: Biochemical Assessments

Learning Objectives

After completing this activity the, CNW will be able to:

- describe how laboratory information such as hemoglobin (Hgb) are entered into AIM.

Background

You will either perform a blood test on WIC participants or get an individual's blood test results from a health care provider form. You enter these results into AIM.

- To enter **hemoglobin** values, enter the value you see written on the form. For example:
    - 11gm/dl is entered as "11"
    - 11.3 gm/dl is entered as "11.3"

Activity 2: Biochemical Assessments (continued)

Instructions

1. Complete the worksheet on the next page. For each hemoglobin value given:
    - write down the number you would enter into AIM.

2. Observe a co-worker enter hemoglobin test results into AIM.

3. Write down any notes on the form on the next page.

4. Talk with your mentor or supervisor if you have any questions regarding the process.

Activity 2: Biochemical Assessments

Hemoglobin Worksheet

Value on Form	Value Entered in AIM:	Referral to Dietitian? (√)
Hemoglobin		
11.0 gm/dl		
11 gm/dl		
9.8 gm/dl		
10.4 gm/dl		
12 gm/dl		

Notes on Biochemical Assessments:

Activity 3: Clinical Assessments

Learning Objectives

After completing this activity, the CNW will be able to:

- identify some conditions that may put a participant at risk.

Background

You may be able to determine if an applicant/ participant may be at risk for health problems by looking at her/his:
- health history,
- current medical condition, and/or
- health/lifestyle habits (such as alcohol, drug, or tobacco use).

Instructions

Activity 3a:
1. Observe a WIC staff person as s/he uses the participant's medical referral forms for information about the participant.

2. Write down your notes on the next page (Activity 3a).

Activity 3b:
1. Read each of the case studies described.

2. For each individual, identify her/his clinical indicator (condition or problem).

3. Write down the condition(s)/problem(s) for each individual to the right of each description.

4. Discuss your findings with your supervisor.

Activity 3a: Clinical Assessments

Notes of Observations *Regarding Use of Medical Referral Forms:*

Activity 3b: Clinical Assessments

Description of Applicant/Participant:	Condition(s)/ Problem(s):
David Chang: • is 2 years old, • was breastfed for the first year of his life, • has a Hgb of 10.5 gm/dl, • eats some solid foods.	
Roberta Juarez: • is 19 years old, • is pregnant, • is homeless, • has a Hgb of 12.2 gm/dl, • smokes about 10 cigarettes/day, • eats mainly beans and rice for dinner.	
Tina Woods: • is 22 years old, • breastfeeds her 2 month-old daughter, • has a Hgb of 13.2 gm/dl, • has a boyfriend who does not allow her to see any of her friends or family members, • eats at fast food restaurants a lot.	
Tommy Cole: • is 4 years old, • is overweight, • has a Hgb of 6.8 gm/dl, • drinks 2-3 cans of soda/day, • has lost 2 teeth due to tooth decay.	

Activity 4: Dietary Assessments

Learning Objectives

After completing this activity, the CNW will be able to:

- assess dietary intake using the 24-hour recall and the *Food Guide Pyramid.*

Instructions

1. Using the blank 24-hour recall form on the next page, write down everything you ate and drank yesterday.

2. Fill in the number of servings for the appropriate food groups.

3. Compare your intake with the recommended servings of the *Food Guide Pyramid.*

4. Ask a friend or co-worker to write down everything s/he ate and drank yesterday.

5. Fill in the number of servings for the appropriate food groups.

6. Compare the friend's/co-worker's intake to the recommended servings of the *Food Guide Pyramid.*

7. Have your supervisor review your assessments.

8. Discuss what you learned with your supervisor.

Activity 5: Identifying the A, B, C, D's

Learning Objectives

After completing this activity, the CNW will be able to:

- identify anthropometric, biochemical, clinical, and dietary indicators for 5 cases studies.

Instructions

1. Refer to the above copy of the Risk Code chart.

2. Read each of the case studies on the following pages.

3. Using the Risk Code chart, identify the anthropometric, biochemical, clinical, and dietary indicators (risks) for each case study.

4. Write down the risks on the form.

5. For those cases studies that require a referral to a Registered Dietitian or WIC nutritionist, write *"Referral to RD needed."*

6. Discuss what you learned and any questions you may have with your supervisor.

Activity 5: Identifying the A, B, C, D's

Case Study 1:

Selena Hernandez is a 19 year-old pregnant woman. The following information describes her:

- this is her first pregnancy; she is 15 weeks pregnant,
- before she became pregnant, her BMI was 27.0,
- her Hgb is 10.1 gm/dl,
- she is currently living in a homeless shelter,
- her 24-hour recall listed the following foods:
  - 2 slices white toast
  - 12 oz Tang® orange drink
  - 1 C cooked rice
  - 1 C pinto beans cooked with 2 Tbs lard
  - 3 tortillas
  - 1 - 12 oz can Pepsi®
  - 1 small bag potato chips
  - 2 cheeseburgers
  - 1 C vanilla ice cream

Anthropometric Indicator(s):

Biochemical Indicator(s):

Clinical Indicator(s):

Dietary Indicator(s):

Activity 5: Identifying the A, B, C, D's

Case Study 2:

Sarah Jones is 28 years old. The following information describes her:
- she is breastfeeding her 2 month-old son,
- she is 5 feet, 6 inches tall,
- she weighs 130 pounds,
- she smokes 10 cigarettes/day,
- her Hgb is 10.8 gm/dl,
- her 24-hour recall listed the following foods:
  - 2 C coffee
  - 1 slice chocolate cake with frosting (about 2 inches by 2 inches)
  - 1small bag french fries
  - 1 - 12 oz can diet Pepsi®
  - 1 small green salad (lettuce, 1 carrot, ½ tomato with 2 Tbs ranch dressing)
  - 1 chicken breast
  - 1 baked potato with 2 Tbs butter
  - 1 glass of wine

Anthropometric Indicator(s):

Biochemical Indicator(s):

Clinical Indicator(s):

Dietary Indicator(s):

Activity 5: Identifying the A, B, C, D's

Case Study 3:

Jordan Heller is 3 months old. The following information describes him:

- he lives in a migrant farmworker camp with his mother, father, and 3 sisters,
- he is overweight (at the 91st percentile weight for length),
- his Hgb is 10.6 gm/dl,
- he is being fed formula, he drinks about 30 oz a day,
- his mother often adds rice cereal to his bottle.

Anthropometric Indicator(s):

Biochemical Indicator(s):

Clinical Indicator(s):

Dietary Indicator(s):

Activity 5: Identifying the A, B, C, D's

Case Study 4:
Susan Chu is a 25-year-old pregnant woman. The following information describes her:
- she is 9 weeks pregnant,
- this is her second pregnancy; her first child had a birth weight of 9 pounds,
- she is 5 feet, 5 inches tall,
- she weighed 120 pounds before she became pregnant,
- she now weights 115 pounds,
- her Hgb is 9.6 gm/dl,
- her 24-hour recall listed the following foods:
    - 6 oz orange juice
    - 1 C cooked rice
    - stir fried vegetables (bok choy and pea pods) with tofu (8 oz)
    - 1 fried egg
    - 1 C rice noodles
    - 1 tangerine

Anthropometric Indicator(s):

Biochemical Indicator(s):

Clinical Indicator(s):

Dietary Indicator(s):

Activity 5: Identifying the A, B, C, D's

Case Study 5:

Tommy Jenkins is 4 years old. The following information describes him:

- his weight for height is greater than 98%,
- his Hgb is 9.2 gm/dl,
- he has Down's Syndrome,
- he has severe tooth decay and has lost several teeth,
- he drinks from a bottle,
- his 24-hour recall listed the following foods:
    - 1 C oatmeal
    - 4 bottles (8 oz each) of whole milk
    - 1 banana
    - 2 bags of french fries
    - 12 oz of apple juice
    - 1 C of vanilla ice cream

Anthropometric Indicator(s):

Biochemical Indicator(s):

Clinical Indicator(s):

Dietary Indicator(s):

Progress Check Answers

1. Match each type of assessment to its description.

Assessment		**Description**
_D_ Anthropometric	A.	Evaluates a person's food intake.
_C_ Biochemical	B.	Evaluates a person's health history, current medical condition, and health/lifestyle habits.
_B_ Clinical	C.	Measures what is in a person's blood or urine.
_A_ Dietary	D.	Measures a person's body by taking measurements such as height, weight, and head circumference.

2. For each of the methods listed, write the type of data ("A" for anthropometric, "B" for biochemical, "C" for clinical, and "D" for dietary) that is gathered using the method.

   _D_ 24-hour recall

   _B_ hemoglobin test

   _C_ interview of person regarding cigarette smoking habits

   _D_ diet history

   _A_ weight

Progress Check Answers (continued)

3. Mark the following *TRUE or FALSE.*

   FALSE At WIC, a tape measure may be used to measure length or height.

   FALSE When measuring height, make sure the person being measured keeps her/his shoes on.

   TRUE When measuring height/length, the person being measured should be standing up straight or lying down flat.

   TRUE When measuring for height/length, repeat measurements until 2 measurements agree within ¼ inch.

   TRUE A beam balance scale, not a spring balance scale (such as a bathroom scale), should be used for weighing.

   TRUE Adults being weighed should remove heavy outer clothing.

   FALSE A baby should always be weighed with her/his clothing and diaper.

   FALSE A child may hold on to her/his mother if s/he is being weighed standing up.

   TRUE An uncooperative child may be weighed while in the parent's/ caregiver's arms.

   FALSE The Risk Codes assign one of 10 levels to each nutrition/health problem.

4. List 2 methods to assess dietary intake at WIC.
   - *24-hour recall/diet history,*
   - *food record/diary, and*
   - *food frequency questionnaire.*

Progress Check Answers (continued)

5. List at least 3 common physical or medical conditions that can affect a person's nutrition or health status.
   Any 3 of the following are correct:
   - ***anemia,***
   - ***domestic violence,***
   - ***drug abuse,***
   - ***homelessness,***
   - ***lead poisoning,***
   - ***overweight, or***
   - ***smoking.***

6. Using the nutrition intervention Triage System, match the level of intervention with its description.

<u>Level of Intervention</u>		<u>Description</u>
_**D**_ 1		A. Assessment, nutrition education, including an individual nutrition education plan provided by a Registered Dietitian (RD)
_**C**_ 2		B. Assessment, monitoring, referrals, modification of food package, reinforcement of Medical Nutrition Therapy (MNT) care plan provided by a Registered Dietitian (RD)
_**A**_ 3		C. Routine WIC services and some additional nutrition education provided by WIC CNW
_**B**_ 4		D. Routine WIC service provided by WIC CNW